

**Hubungan antara Asam Urat Darah  
dengan Tekanan Darah pada Laki-laki Suku Rote  
yang Tinggal di Kabupaten Timor Tengah Selatan**  
**Association of serum uric acid with blood pressure  
in Rote men living in District Southern Middle East**

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**Abstrak**

Latar Belakang: Dalam berbagai penelitian, asam urat telah diusulkan memiliki hubungan positif dengan hipertensi dan menjadi faktor yang mempengaruhi hipertensi. Hubungan antara hiperurisemia dengan hipertensi semakin diperkuat oleh studi eksperimental dengan hewan coba tikus. Percobaan tersebut menunjukkan adanya peningkatan tekanan darah tikus, setelah kadar asam urat mereka ditingkatkan melalui pemberian *oxonic acid*. Sejauh ini baru dua studi yang menyajikan data mengenai hubungan antara hiperurisemia dan hipertensi berdasarkan ras. Hasil dari kedua studi tersebut adalah orang kulit hitam memiliki kecenderungan hiperurisemia dan hipertensi lebih tinggi, dibandingkan dengan rata-rata yang dialami oleh orang kulit putih. Tujuan Penelitian: berdasarkan laporan hasil penelitian sebelumnya bahwa rata-rata asam urat dan tekanan darah laki-laki suku Rote memiliki nilai diatas standar normal, maka penelitian ini bertujuan untuk mengetahui apakah ada hubungan antara hiperurisemia dengan tekanan darah pada laki-laki suku Rote. Metode penelitian: Penelitian ini merupakan penelitian observasional analitik dengan pendekatan *cross-sectional*. Penelitian ini dilakukan selama satu bulan pada bulan Agustus 2017. Kriteria responden adalah laki-laki suku Rote yang masih homogen. Diperoleh data yang dapat dianalisis sebanyak 84 responden. Data variable penelitian dianalisis menggunakan program *SPSS 16.0 for Windows* dengan pengujian 1) uji normalitas dengan Kolmogorof-Smirnov, 2) Uji Chi Square dan

perhitungan odd rasio, 3) Uji Korelasi Spearman. Hasil Penelitian: penelitian menunjukkan 1) jumlah responden dengan TDS dan TDD tinggi dan hiperurisemia masing-masing sebanyak 66.7% (n=56), sedangkan TDS dan TDD normal tetapi hiperurisemia masing-masing sebanyak 1.2% (n=1) dan 2.4% (n=2). TDS dan TDD tinggi dengan kadar asam urat normal sebanyak 14.3% (n=12) dan 15.5% (n=14), sedangkan TDS dan TDD normal dengan kadar asam urat normal sebanyak 17.9% (n=15) dan 16.7% (n=14); 2) ada hubungan bermakna antara hiperurisemia dengan TDS dan TDD; 3) orang yang memiliki tekanan darah > 140 mmHg memiliki resiko lebih besar terhadap hiperurisemia sebesar 70 kali (OR: 70, CI: 8.41 – 582.0), orang yang memiliki tekanan darah diastolik > 90 mmHg memiliki resiko lebih besar terhadap hiperurisemia sebesar 29 kali (OR: 29, CI: 5.97-146.7); 3) Kesimpulan: ada hubungan bermakna antara kadar asam urat dengan tekanan darah serta adanya korelasi positif.

Kata Kunci: Kadar Asam Urat Darah, Tekanan Darah, Suku

### **Abstract**

Background: In various studies, uric acid has been proposed to have a positive relationship with hypertension and be a factor that affects hypertension. The association between hyperuricemia and hypertension was further strengthened by experimental studies with rat-fed animals. The experiments showed an increase in rat blood pressure, after their uric acid levels were increased through the administration of oxonic acid. So far, only two studies have provided data on the association between hyperuricemia and hypertension based on race. Results from both studies were blacks with hyperuricemia and higher hypertension, compared with the average experienced by whites. Research Objectives: Based on previous research reports that the average uric acid and blood pressure of male Rote tribe has a value above the normal standard, then this study aims to determine whether there is a relationship between hyperuricemia with blood pressure in male Rote tribe. Research method: This research is an observational analytic research with cross-sectional approach. This study was conducted for one month in August 2017. Criteria of respondents are male Rote tribe who

are still homogeneous. Obtained data that can be analyzed as much 84 responder. Research variable data were analyzed using SPSS 16.0 for Windows program with 1) normality test with Kolmogorof-Smirnov, 2) Chi Square test and odd ratio calculation, 3) Spearman Correlation Test. Results: The study showed 1) the number of respondents with high TDS and TDD and hyperuricemia were 66.7% (56), respectively, while TDS and TDD were normal but hyperuricemia were 1.2% (1) and 2.4% (2), respectively. TDS and TDD were high with normal uric acid levels of 14.3% (12) and 15.5% (14), whereas normal TDS and TDD were 17.9% (15) and 16.7% (14) normal uric acid levels; 2) there was a significant association between hyperuricemia with TDS and TDD; 3) people with blood pressure > 140 mmHg had a greater risk of hyperuricemia 70 times (OR: 70, CI: 8.41 - 582.0), people with diastolic blood pressure > 90 mmHg had a greater risk of hyperuricemia at 29 times (OR: 29, CI: 5.97-146.7); 3) Conclusion: There is a significant relationship between uric acid levels with blood pressure and positive correlation.

Keywords: Blood Uric Acid, Blood Pressure, Ethnicity

